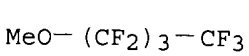
S. Report

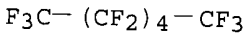
L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN
RN 163702-07-6 REGISTRY
CN Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **1,1,1,2,2,3,3,4,4-Nonafluoro-4-methoxybutane**
CN 1-Methoxynonafluorobutane
CN HFC 7100
CN HFE 449
CN Methyl nonafluorobutyl ether
CN Methyl perfluorobutyl ether
CN n 7100
CN Perfluorobutyl methyl ether
FS 3D CONCORD
MF **C5 H3 F9 O**
CI COM
SR CAS Registry Services
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, IPA, MSDS-OHS, TOXCENTER, USPAT2, USPATFULL
Other Sources: TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



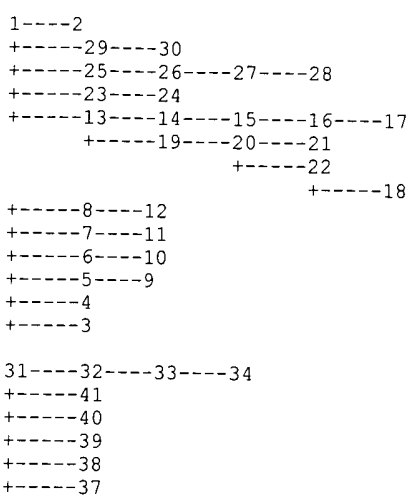
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

221 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
222 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN
RN 355-42-0 REGISTRY
CN Hexane, tetradecafluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN FC 72
CN Fluorinert FC 72
CN Fluorinert PF 5060
CN Flutec PP 1
CN n-Tetradecafluorohexane
CN Perflexane
CN Perfluoro-n-hexane
CN Perfluorohexane
CN PF 5060
CN PP 1
CN **Tetradecafluorohexane**
FS 3D CONCORD
DR 154452-93-4, 82785-18-0
MF C6 F14
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, DIOGENES, DRUGNL, DRUGUPDATES, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, PHAR, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



-------claim tree-----------



42

43

44

-------112--------------

claim# 44 contains the word -> prefer
claim# 44 contains the word -> such as
claim# 44 contains the word -> for example
claim# 44 contains the word -> type
claim# 44 contains the word -> especially

--------best-----------
6383998
6419909
6616917
5306498
6224851
6251375
6395285
6342469
6242396
6228377
6002038
6548073
6333362
5612043
6503520
5741766
6534071
6468550
4960764
5851539
6509024
6562353
6297204
6399080
6576248
6562322
5800816
6274152
6562354
6541432
6326013
6210692

5665687
6361782
6534072
6491931
6489283
6180123
6544533
6395262
6245322
5972315
5833997
5955003
6623769
6521211
6511655
6372202
6551576
6565839
6551604
5733572
6506391
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6491934
6485732
6541018
6528071
6491935
6555099
6565865
6572870
6495150
6576623
6476063
6488947
6485731
6565885
6486165
6492351
6531165
6524562
6455055
6436885
6613341
6346237
6482517
6589542
6569404
6277387
5993833
5916575
6514977
5997887
6306806
6534047
6491928
6268322
6322801
6573257
6391910
6525059
6423713
6511656
6423323
6541473
6531467
6537537
6080708

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424/401
424/59
424/63

424/64
514/938
510/417
424/707
510/136
424/701
514/846
514/844
510/130
514/937
424/400
514/845
510/159
424/60
510/123
510/131
424/61
424/69
510/158
514/957
424/709
516/23
424/697
424/679
424/617
424/706
514/847
514/759
424/62
134/40
424/677
514/747
424/696
424/680
510/466

--------keywords---------------

make-up removal removing make-up isododecane isoparaffin polydimethyl siloxane pdms polysiloxane trifluor
omethyl pf5060 pf5050 perfluoroalkane flutec perfluorocyclopentane perfluorocycloalkyl shaking shake lowe
r phase upper phase two phase fatty phase emulsion microemulsion perfluoro makeup make-up xanthan Glycero
l fragrances polymers emollient Corning emulsions emulsifier ingredients fresh palmitate dissolved neutra
lized ammonium acrylate antioxidants fluoro silicate perfluorocycloalkyls dimethicone copolyol integrity
CF-- softness p--F cosmetic ingredient oily crosslinked polymers polyacrylic softening guar polyvinylpyrr
olidone detergent synthetic polymers ethyl palmitate isopropyl isostearate petroleum perfluoroalkanes myr
istyl creams homogeneous emulsion hexyl laurate detergent surfactants afford thickeners dyes magnesium pe
troleum jelly xanthan gum polyvinyl surfactants crosslinked acrylate imparting polyvinyl alcohol polysilo
xanes formulated guar gum surfactant m--CF polysaccharide butyl myristate synth
etic impurities derivatives oil-in-water emulsion branched silicone isopropyl palmitate myristyl propiona
te dispersed phases detergent surfactant miscible wool greasy propionate dissolving thickener ingredient
cotton hydrocarbon fluoroalkyls water-in-oil heterofluoroalkyls immiscible milk fatty acids t--X--CF perf
luoroalkyl cream phase diisopropyl oil-in-water aqueous phase hexyl volatile hydrocarbon fatty acid isobu
tyl n--CF isodecyl neopentanoate perfluoromorpholine dioctyl isopropyl perfluoromethylcyclopentane- dioct
yl adipate radicals isopropyl myristate alcohols diisopropyl adipate ranging oils acid esters perfluoro d
odecafluoropentane adipate skin tetradecafluorohexane anhydrous volatile fatty esters bromoperfluorooctyl
nonafluoromethoxybutane fatty nonafluoroethoxyisobutane cleansing non-fluoro cosmetic radical polydimeth
ylsiloxanes cyclopentasiloxane cyclohexasiloxane isoparaffins myristate hexanoate laurate octyldodecyl oc
tanoate isodecyl neopentanoate caprate/caprylate isohexyl isostearate pad soake
d multiphase make-up-removing W/O O/W traces accumulated originating pollution cleanse attacking non-wate
rproof nevertheless drawback hydrolipid irritations eyelids eyes lips disadvantageous delicate waterproof
jelly sensation extensive studies high-quality freshness impairing pleasantness comfort appreciable
--------references-------------

---------- 6383998
classes:1 510/136 1 134/40 1 424/59 1 424/61 1 424/64 1 424/401 1 510/130
score: 1758

keywords: make-up removal;removing make-up;fatty phase;emulsion;perfluoro;make-up;xanthan;Glycerol;polyme
rs;emulsions;emulsifier;dissolved;ammonium acrylate;fluoro;perfluorocycloalkyls;dimethicone copolyol;inte
grity;cosmetic ingredient;oily;crosslinked polymers;polyacrylic;guar;detergent;petroleum;perfluoroalkanes
;myristyl;creams;homogeneous;emulsion;detergent surfactants;thickeners;petroleum jelly;xanthan gum;surfac
tants;crosslinked;acrylate;imparting;polysiloxanes;formulated;surfactant;polysaccharide;synthetic;impurit

ies;derivatives;branched;silicone;dispersed;detergent surfactant;miscible;wool;greasy;dissolving;thickene
r;ingredient;cotton;hydrocarbon;fluoroalkyls;water-in-oil;heterofluoroalkyls;immiscible;milk;perfluoroalk
yl;cream;phase;diisopropyl;oil-in-water;aqueous phase;hexyl;volatile hydrocarbon;fatty acid;isobutyl;perf
luoromorpholine;dioctyl;isopropyl;radicals;alcohols;ranging;oils;acid esters;perfluoro;dodecafluoropentan
e;skin;tetradecafluorohexane;anhydrous;volatile;fatty esters;bromoperfluoroocty
l;nonafluoromethoxybutane;fatty;cleansing;non-fluoro;cosmetic;polydimethylsiloxanes;cyclopentasiloxane;cy
clohexasiloxane;laurate;octyldodecyl;isodecyl;isohexyl;pad;soaked;make-up-removing;W/O;O/W;traces;accumul
ated;originating;cleanse;attacking;non-waterproof;nevertheless;drawback;hydrolipid;disadvantageous;delica
te;waterproof;jelly;sensation;extensive;studies;high-quality;freshness;pleasantness;appreciable;lies;perf
luoromethylcyclopentane;BNFL;Fluorochemicals;MSX;Pecosil;Phoenix;belonging;alkyl-;alkoxydimethicone;copol
yol;dimethicone;copolyols;milks;biopolymers;carob;crosslinked;myristyl;polysiloxanes;petroleum;polyacryli
c;

- e of a thickener, which is then present in an amount ranging from 0.1 to 5% by weight, relative to the total weight of the composition in milk or cream form.

The thickener can be chosen, for example, from:

(a) **polysaccharide** biopolymers such as **xanthan gum**, carob gum, **guar gum**, alginates, and modified celluloses such as hydroxyethylcellulose, methylcellulose, hydroxypropylcellulose, and carboxymethylcellulose, and

(b) **synthetic polymers**, for example polyacrylic acids such as the polyglyceryl (meth)acrylate polymers sold under the names "Hispagel.RTM.," "Lubragel.RTM.," or "Sepigel 305.RTM.," respectively, by the companies Hispano Quimica, Guardian, and SEPPIC, **polyvinyl**pyrrolidone, **polyvinyl** alcohol, **crosslinked** polymers of acrylamide and **ammonium **acrylate** sold under the names "PAS 5161 e" or "Bozepololl.RTM." by the company Hoechst, **crosslinked** polymers of acrylamide and methacryloyloxyethyl-trimethylammonium chloride sold under t

- incorporated herein by reference.

The compositions according to the invention as defined above can also comprise any conventional **cosmetic ingredient** such as, for example, preserving agents, **antioxidants**, fragrances, soluble dyes, or active principles which have, for example, emollient, regenerating, decongesting, anti-inflammatory, lightening, detoxifying, cicatrizing, or **softening** activity.

The present invention moreover relates to a process for removing make-up from the skin or for cleansing the skin, which comprises (1) applying, preferably with the fingers, a pad of cotton wool, or a paper tissue, a sufficient amount of the composition as defined above, to the parts of the skin to be cleansed or from which make-up is to be removed, (2) lightly massaging so as to detach the maximum amount of **impurities** and of the make-up product, and (3) removing the composition using a pad of cotton wool optionally soaked in water.

Sever

---------- 6419909
classes:1 424/59 1 424/701 1 424/709 1 424/400 1 424/401 1 514/844 1 514/957
score: 1467

keywords: perfluoroalkane;perfluorocycloalkyl;fatty phase;emulsion;xanthan;Glycerol;polymers;Corning;emul
sions;ingredients;neutralized;ammonium acrylate;fluoro;perfluorocycloalkyls;cosmetic ingredient;crosslink
ed polymers;polyacrylic;guar;perfluoroalkanes;creams;homogeneous;emulsion;dyes;magnesium;polyvinyl;surfac
tants;crosslinked;acrylate;surfactant;synthetic;derivatives;oil-in-water emulsion;branched;silicone;dispe
rsed;phases;miscible;greasy;thickener;ingredient;fluoroalkyls;water-in-oil;heterofluoroalkyls;immiscible;
perfluoroalkyl;cream;phase;oil-in-water;aqueous phase;perfluoromorpholine;ranging;oils;dodecafluoropentan
e;skin;volatile;bromoperfluorooctyl;nonafluoromethoxybutane;fatty;cosmetic;radical;cyclopentasiloxane;cyc
lohexasiloxane;isoparaffins;W/O;O/W;drawback;freshness;perfluoromethylcyclopentane;BNFL;Fluorochemicals;P
hoenix;belonging;alkyl-;copolyol;dimethicone;copolyols;Dow;biopolymers;carob;alginates;crosslinked;minera
l;silicone surfactant;Corning;silicones;polyacrylic;

- d to obtain, the **emulsion**s can optionally contain at least one thickener in a proportion of about from 0.05% to 10%, but preferably between 0.1% and 5% by weight.

The thickener can be selected in particular from:

polysaccharide biopolymers such as **xanthan gum**, carob gum, **guar gum**, alginates and modified celluloses such as hydroxyethylcellulose, methylcellulose, hydroxypropylcellulose and carboxymethylcellulose;

synthetic polymers, for instance polyacrylic acids such as the polyglyceryl (meth)acrylate polymers sold under the names "Hispagel.RTM." or "Lubragel.RTM." by the company Hispano Quimica or the company Guardian, **polyvinylpyrrolidone**, **polyvinyl alcohol**, **crosslinked** polymers of

acrylamide and of **ammonium **acrylate** sold under the trade names "PAS 5161.RTM." or "Bozepol.RTM." by the company Hoechst, **crosslinked** polymers of acrylamide and of methacryloyloxyethyltrimethylammonium chloride sold under the trade name "Salcare SC 92.RT

---------- 6616917
classes:1 424/59 1 424/701 1 424/709 1 424/400 1 424/401 1 514/844 1 514/957
score: 1415

keywords: isododecane;perfluoroalkane;perfluorocycloalkyl;fatty phase;emulsion;xanthan;Glycerol;polymers;Corning;emulsions;ingredients;neutralized;ammonium acrylate;fluoro;perfluorocycloalkyls;dimethicone copolyol;cosmetic ingredient;crosslinked polymers;polyacrylic;guar;perfluoroalkanes;creams;homogeneous;emulsion;dyes;magnesium;xanthan gum;polyvinyl;surfactants;crosslinked;acrylate;surfactant;synthetic;derivatives;branched;silicone;dispersed;phases;miscible;greasy;thickener;ingredient;fluoroalkyls;water-in-oil;heterofluoroalkyls;immiscible;perfluoroalkyl;cream;phase;oil-in-water;aqueous phase;perfluoromorpholine;ranging;oils;dodecafluoropentane;skin;volatile;bromoperfluorooctyl;nonafluoromethoxybutane;fatty;cosmetic;radical;cyclopentasiloxane;cyclohexasiloxane;isoparaffins;W/O;O/W;drawback;freshness;perfluoromethylcyclopentane;BNFL;Fluorochemicals;Phoenix;belonging;alkyl-;copolyol;dimethicone;copolyols;Dow;biopolymers;carob;alginates;crosslinked;mineral;silicone surfactant;Corning;silicones;polyacrylic;

- rom 0.05% to 10%, but preferably between 0.1% and 5% by weight.
The thickener can be selected in particular from:
polysaccharide biopolymers such as **xanthan gum**, carob gum, **guar gum**, alginates and modified celluloses such as hydroxyethylcellulose, methylcellulose, hydroxypropylcellulose and carboxymethylcellulose;
synthetic polymers, for instance polyacrylic acids such as the polyglyceryl (meth)acrylate polymers sold under the names "Hispagel.RTM." or "Lubragel.RTM." by the company Hispano Quimica or the company Guardian, **polyvinylpyrrolidone**, **polyvinyl alcohol**, **crosslinked** polymers of acrylamide and of ammonium **acrylate** sold under the trade names "PAS 5161.RTM." or "Bozepol.RTM." by the company Hoechst, **crosslinked** polymers of acrylamide and of methacryloyloxyethyltrimethylammonium chloride sold under the trade name "Salcare SC 92.RTM." by the company Allied Colloids, and **magnesium** aluminium **silicate**.
The **crosslinked** polymers of acryla

---------- 5306498
classes:1 424/401 1 424/60 1 424/63 1 424/64 1 514/7724 1 514/847 1 514/937
score: 1263

keywords: fatty phase;emulsion;emulsions;emulsifier;palmitate;creams;emulsion;synthetic;silicone;dispersed;water-in-oil;phase;oil-in-water;aqueous phase;ranging;oils;skin;fatty;cosmetic;W/O;dimethicone;waxes;mineral;

- in a first stage preparing a water-in-oil **emulsion** by adding an aqueous or water phase to a fatty or oil phase so as to obtained said water-in-oil **emulsion**, and
(b) in a second stage, adding said water-in-oil **emulsion** prepared in stage (a) to a gelled aqueous or water phase containing, as a gelling agent, an acrylic or methacrylic acid polymer or copolymer combined with a polyglyceryl methacrylate so as to produce said triple **emulsion**.
17. The process of claim 16 which includes introducing a perfluorinated oil into said fatty or oil phase.
18. The process of claim 16 which includes introducing, as a co-emulsifier, a dodecyl glycol and ethylene oxide copolymer into said fatty or oil phase.
19. The process of claim 16 which includes introducing a perfluorinated oil, and a dodecyl glycol and ethylene oxide copolymer, as a co-emulsifier, into said fatty or oil phase.
20. The process of claim 16 which includes in said first stage (a) adding
- ithout destabilizing the **emulsion** as a result.
The subject of the invention is therefore a triple **emulsion** exhibiting the characteristics defined below.
Another subject of the invention is the process for producing such an **emulsion**.
The subject of the invention is also the cosmetic application of such **emulsion**s.
Other subjects of the invention will emerge on reading the following description and examples.
The triple **emulsion** conforming to the invention is essentially

characterized in that it comprises (A) a continuous gelled outer aqueous phase, containing, as gelling agent, at least one acrylic or methacrylic acid polymer or copolymer, combined with a polyglyceryl methacrylate; (B) a fatty phase **dispersed** in the outer aqueous phase and an aqueous phase (C) **dispersed** in the fatty phase.

In accordance with a preferred embodiment of the invention, the gelled outer aqueous phase represents 40 to 60% by weight of the total **emulsion**, th

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---------- 6224851

classes:1 424/59 1 424/63 1 424/64 1 424/69 1 424/707 1 424/401 1 514/747 1 514/759 1 514/845 1 514/938

score: 1252

keywords: perfluoroalkane;flutec;perfluorocycloalkyl;fatty phase;emulsion;make-up;polymers;Corning;emulsions;emulsifier;fluoro;softness;oily;petroleum;perfluoroalkanes;creams;emulsion;petroleum jelly;polyvinyl;surfactants;surfactant;synthetic;derivatives;branched;silicone;miscible;water-in-oil;fatty acids;perfluoroalkyl;phase;oil-in-water;aqueous phase;hexyl;fatty acid;perfluoromorpholine;isopropyl;alcohols;oils;acid esters;dodecafluoropentane;tetradecafluorohexane;anhydrous;volatile;fatty esters;fatty;cosmetic;radical;W/O;O/W;nevertheless;drawback;eyelids;lips;jelly;studies;appreciable;transfer-resistant;perfluoromethylcyclopentane;BNFL;belonging;alkyl-;alkoxydimethicone;copolyol;dimethicone;Dow;waxes;mineral;softness;coconut;tallow;Corning;petroleum;

- r of propylene glycol monomyristate and **myristyl** myristate.

As waxes which can be used in the compositions according to the invention, mention may also be made of cetyl alcohol, stearyl alcohol, mono-, di- and triglycerides which are solid at 25.degree. C., stearic monoethanolamide, colophony and its **derivatives** such as glycol and glyceryl abietates, sucroglycerides and calcium, **magnesium**, zinc and aluminium oleates, myristates, lanolates, stearates and dihydroxystearates, and fluoro waxes.

C--The fatty substances of pasty type can be of mineral, animal, plant or **synthetic** origin.

Among the pasty fatty substances, mention may be made in particular of **synthetic** esters such as arachidyl propionate, **polyvinyl** laurate, polyethylene waxes and organopolysiloxanes such as alkyldimethicones, alkoxydimethicones or dimethicone esters.

Needles to say, the anhydrous compositions as defined above can also contain one or more conventional cosmet

- , and (iii) at least one emulsifier in a proportion of between about 1 and about 10% by weight relative to the total weight of the composition in **emulsion** form.

As emulsifier or **surfactant** which can be used in the compositions in the form of a W/O or O/W **emulsion**, mention may be made in particular of **silicone surfactants** and in particular those belonging to the alkyl- or alkoxydimethicone copolyol family. Among the alkyl- or alkoxydimethicone copolyols, mention may be made in particular of the compounds corresponding to the following general formula:

##STR5##

in which:

R is a hydrogen atom, a C.sub.1 -C.sub.16 alkyl or an alkoxy or acyl,

R' is a C.sub.8 -C.sub.22 alkyl or alkoxy radical,

u=0 to 200,

v=1 to 40,

w=1 to 100,

the molecular weight of the radical --O--(C.sub.2 H.sub.4 O).sub.x --(C.sub.3 H.sub.6 O).sub.y --R being from 250 to 2000, x and y being chosen such that the weight ratio of the oxyethylene/oxypropylene groups is

- polyethoxylated stearyl or cetylstearyl alcohol, fatty acid esters of sucrose, glucose alkyl esters, in particular polyoxyethylenated fatty esters of (C.sub.1 -C.sub.6) alkylglucose, and

among the anionic **surfactants**: amine stearates.

These **emulsion**s an preferably be in the form of **creams** and can be used as make-up or sun-screen products. In the latter case, they contain UVA and/or UVB sunscreens and white pigments, in a variable proportion depending on the desired degree of protection.

The compositions as described above, whether of the anhydrous type or in the form of a dispersion, have excellent cosmetic properties such as, in particular, an excellent ease of application, great **softness** and lead to the production of a uniform make-up.

The compositions as have just been described above can also contain one or more conventional cosmetic adjuvants such as vitamins, hormones,

antioxidants, preserving agents, fragrances, **thickeners**,